

Module 1 - Lecture 8

# Collections Part 2



# Review

- ArrayLists
- Queues
- Stacks
- Primitive Wrapper classes



# Question...

Who has performed a Google search?

Who has used a dictionary to look up the definition of word?

Who has used the index in a book?



**Map<K,V>**

# Map<K,V>

- Key-Value pairs
- Ordering is not consistent
- Duplicate keys are not allowed
- Duplicate values are allowed



# Map<K,V>

## Create

```
Map<String,Integer> nameAgeMap = new HashMap<String,Integer>();
```

## Add elements

```
nameAgeMap.put("Sally", 23);  
nameAgeMap.put("Bobby", 8);
```

## Remove elements

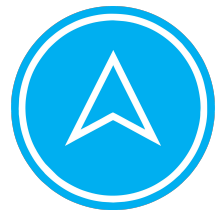
```
nameAgeMap.remove("Bobby");
```

## Check if exists

```
nameAgeMap.containsKey("Bobby");
```

## Get a value

```
Integer sallyAge = nameAgeMap.get("Sally");
```



# Let's Code!

# Question...

How do you keep track of a unique list of stuff?





**Set<T>**

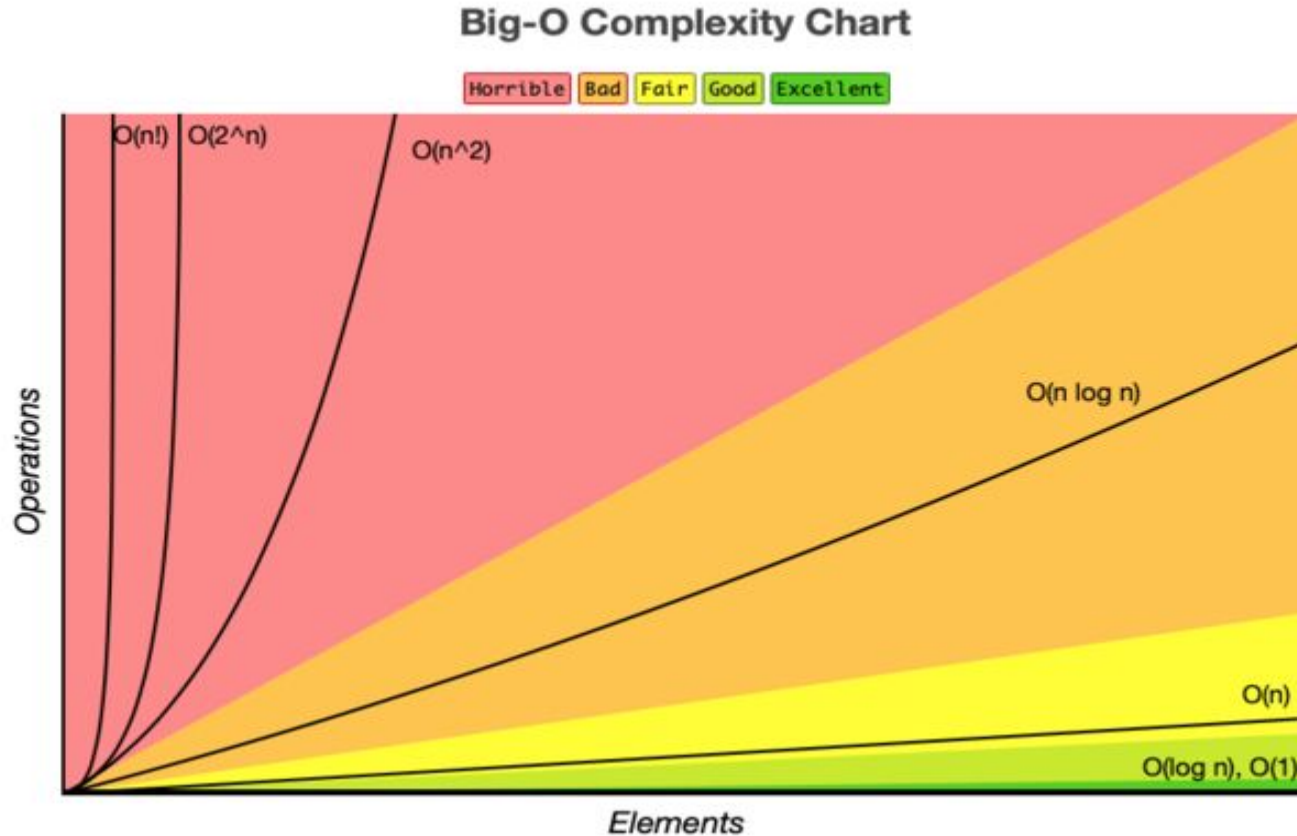
# Set<T>

- A list that contains no duplicate elements
  - Can contain at most 1 null element
  - Cannot contain two elements where `element1.equals(element2)` returns true
- Ordering is not consistent



# Let's Code!

# Algorithmic Complexity



# Reading

- Module 1
  - Classes and Encapsulation



QUESTIONS?

